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\*\*\* YOU HAVE NEW MAIL \*\*\*

=> s nucleic acid? and conductive surface

3 FILES SEARCHED...

L1 182 NUCLEIC ACID? AND CONDUCTIVE SURFACE

=> s l1 and hybrid

L2 62 L1 AND HYBRID

=> s l2 and hybrid (2a) surface

L3 2 L2 AND HYBRID (2A) SURFACE

=> d l3 bib abs 1-2

L3 ANSWER 1 OF 2 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1999-372624 [32] WPIDS

CR 2000-482839 [41]

DNN N1999-278010 DNC C1999-110177

TI Oligonucleotides tagged with photoinducible redox-active unit - for  
binding to conductive surfaces for electrochemical detection of  
hybridisation.

DC B04 D16 S03

IN HARTWICH, G

PA (HART-I) HARTWICH G

CYC 1

PI DE 19901761 A1 19990701 (199932)\* 28

ADT DE 19901761 A1 DE 1999-1001761 19990118

PRAI DE 1999-19901761 19990118

AN 1999-372624 [32] WPIDS

CR 2000-482839 [41]

AB DE 19901761 A UPAB: 20000905

A **nucleic acid** oligomer with a photoinducible  
redox-active unit comprising one or more electron donors and one or more  
electron acceptors covalently attached is new.

Also claimed is (1) a modified **conductive surface**  
comprising one or more modified **nucleic acid** oligomers  
as above bound to a **conductive surface**; and (2) a  
method for electrochemically detecting oligomer hybridisation, comprising  
contacting a modified **conductive surface** as above with  
**nucleic acid** oligomers.

USE - Probes comprising single-stranded DNA, RNA or PNA (peptide  
**nucleic acid**) oligomers linked at one end to a  
**conductive surface** and at the other end to a

photoinducible redox-active unit can be used to detect hybridisation of a target oligonucleotides. This is possible because hybridisation increases the electrical communication between the **conductive surface** and the photoinducible redox-active unit. The probes may also be used for sequencing and detection of mismatched basepairs.  
Dwg.0/6

L3 ANSWER 2 OF 2 USPATFULL on STN  
AN 1999:128361 USPATFULL  
TI Polymer-electrodes for detecting **nucleic acid**  
hybridization and method of use thereof  
IN Thorp, H. Holden, Chapel Hill, NC, United States  
Loomis, Carson R., Durham, NC, United States  
Napier, Mary E., Carrboro, NC, United States  
PA The University of North Carolina at Chapel Hill, Chapel Hill, NC, United  
States (U.S. corporation)  
Xantho, Inc., Research Triangle Park, NC, United States (U.S.  
corporation)  
PI US 5968745 19991019  
AI US 1997-950503 19971014 (8)  
RLI Continuation-in-part of Ser. No. US 1996-667338, filed on 20 Jun 1996,  
now patented, Pat. No. US 5871918, issued on 16 Feb 1999 which is a  
continuation-in-part of Ser. No. US 1995-495817, filed on 27 Jun 1995,  
now abandoned  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Campbell, Eggerton A.  
LREP Myers Bigel Sibley & Sajovec  
CLMN Number of Claims: 33  
ECL Exemplary Claim: 1  
DRWN 8 Drawing Figure(s); 5 Drawing Page(s)  
LN.CNT 1490  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
AB A polymer-electrode including (a) a substrate having a conductive  
working surface; and (b) a polymer layer on the conductive working  
surface. The polymer layer has a plurality of microfluidic reaction  
openings distributed throughout the layer. An oligonucleotide probe can  
be attached to the polymer layer and is available to capture target  
**nucleic acid**. A soluble mediator can diffuse freely  
and transfer electrons from the preselected base in the hybridized  
**nucleic acid** to the conductive working surface of the  
substrate. An electronic signal generated from the electron transfer  
reaction is detected and quantitated.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.